PROCESSES AND PROPERTIES INDEX

RYaBOV, A.

21

**Refining of fish oils.** A. Ryabov.—*Masloboino Zhirovoe Delo* 12, 560(1936).—The usual losses of fish oil in the process of alk. refining and washing were eliminated by treating the oil at 40–5° with 5% excess of 27° Be. NaOH and 2.5% of conc. NaCl inside of 20–5 min. and sepg. from the soapstock after 12 hrs. The resulting oil, free from soapstock, is nearly colorless and dry, acidity 0.05–0.1%. The oil hydrogenated with 0.4% Ni gave a fat m. 48°. Chas. Blanc

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

RYABOV, A.

ca

27

PROCESSES AND PROPERTIES INDEX

**Refining of black cottonseed oil.** A. Ryabov. *Masloboino Zhirovoe Delo* 13, No. 5, 13(1937).—In the usual refining of black cottonseed oil with excess of 17°Bé. NaOH up to 100% a max. 90% yield of comparatively dark and difficultly hydrogenated oil is obtained. One of the chief losses is in the wash waters contg. about 1.79% oil. According to the new method of refining, 84-90% of pale yellow oil, acidity 0.18-0.2%, can be obtained by treating the oil at 25-30° and toward the end at 40-5° with the calcd. amt. of 10°Bé. NaOH with a gradual addn. of 1-1.5% of solid NaCl. The stirring by an air current is continued and 18°Bé. NaOH is added until the sepn. of oil and soapstock is completed. After settling for 2-3 hrs., the sepd. oil is heated to 80-90°, then dried with an air current and filtered at 90-100°. The oil is free from soapstock and is easily hydrogenated. C. B.

METALLURGICAL LITERATURE CLASSIFICATION

RYABOV, A. A. FA 16/49T30

USSR/Electricity Sep 48
Potentiometers
Instruments, Measuring

"Tube-Equipped Potentiometer," A. A. Ryabov, D. A. Vyakhirev, I. B. Rabinovich, 2½ pp

"Zavod Lab" Vol XIV, No 9

Describes tube potentiometer for measuring EMF of galvanic circuits. Includes two circuit diagrams and one photograph. Instrument gives reliable steady readings during continuous operation, and is not affected by sudden voltage changes.

[redacted] 16/49T30

RYABOV, A. A.

PA 51/49T47

USSR/Nuclear Physics - Counters - May 49
Electronics

"Pulse Counter With a Conversion Circuit," S. I. Kaplanskiy, A. A. Ryabov, Sci Res Inst of Chem, Chair of Phys Chem, Gor'kiy State U, 3 pp

"Zhur Tekh Fiz" Vol XIX, No 5

Describes instrument, featuring a multivibrator triggering circuit, which can record pulses with conversion factors of 2, 5, 10, 20, and 40. Electrical circuit (three tubes) is very simple, and is equivalent to usual complex converter consisting of 12 - 15 tubes. Maximum counting speed

[redacted]

51/49T47

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USSR/Nuclear Physics - Counters (Contd) May 49

for counter located in instrument is 3,500 pulses/min. Therefore, maximum counting speed on instrument described with converter set on 40 is 140,000 pulses/min. Submitted 5 May 48.

[redacted]

51/49T47

RYABOV, A.B.

Position of the pressure center and conditions for the balance of a body in a liquid with nonhomogeneous density. Izv. vys. ucheb. zav.; prib. 7 no.4:108-113 '64 (MIRA 18:1)

1. Moskovskiy aviatsionnyy institut.

RYABOV, A.B.

Conditions for the presence of a constant pressure center in a body of a complex geometrical shape. Izv. vys. ucheb. zav.; prib. 8 no.5:94-96 '65. (MIRA 18:10)

1. Moskovskiy ordena Lenina aviatsionnyy institut imeni Ordzhonikidze.

L 08956-67 EWT(1)/EWT(m) JD/WW

ACC NR: AP6009179 (N) SOURCE CODE: UR/0146/65/008/005/0094/0096

35

AUTHOR: Ryabov, A. B.

ORG: Moscow Aviation Institute im. S. Ordzhonikidze (Moskovskiy aviatsionnyy institut)

TITLE: Conditions of existence of a constant pressure center in a body of complex geometrical shape

SOURCE: IVUZ. Priborostroyeniye, v. 8, no. 5, 1965, 94-96

TOPIC TAGS: hydrostatic pressure, pressure center, ~~buoyancy~~ gravitation

ABSTRACT: A shaped solid body is immersed in a liquid whose density varies with depth and which is subjected to a gravitation; the liquid is in a state of stable equilibrium. Under certain conditions, the line of application of the lift force will always pass through a single point within the body which is called the constant center of pressure. The shaped body is partitioned into a number of simple bodies, and by combining their lift forces, formulas for the coordinates of the constant pressure center of the original body are deduced. Orig. art. has: 5 figures.

SUB CODE: ~~13~~ 20 / SUBM DATE: 04Dec64 / ORIG REF: 002

Cord 1/1 nst

UDC: 532.33

ACCESSION NR: AP4043565 S/0146/64/007/004/0108/0113

AUTHOR: Ryabov, A. B.

TITLE: Position of the center of pressure and conditions of balancing of a body in a nonuniform-density liquid

SOURCE: IVUZ. Priborostroyeniye, v. 7, no. 4, 1964, 108-113

TOPIC TAGS: float, liquid float instrument, float buoyancy

ABSTRACT: The balancing of floating assemblies (intended for an instrument) is performed in special vessels filled with a uniform-density liquid; however, in practice, a complete uniformity of density may not be attained. Hence, the present article considers the balance conditions of a body in a nonuniform-density liquid. The conditions of existence of the point of application of the buoyancy force in the immersed body are determined mathematically; this point can be considered as a permanent center of pressure insofar as the hydrostatic problem

Card 1/2

ACCESSION NR: AP4043565

is concerned. It is shown that if the body shape and the law of depth distribution of density are given, one can find whether or not a permanent center of pressure in the body exists; if it does not, one can ensure a minimum unbalance moment by a reasonable selection of the position of the body-mass center. Orig. art. has: 2 figures, 7 formulas, and 1 table.

ASSOCIATION: Moskovskiy aviatsionny*y institut (Moscow Aviation Institute)

SUBMITTED: 25Dec63 ATD PRESS: 3 ENCL: 00

SUB CODE: ME NO REF SOV: 002 OTHER: 001

Card 2/2

AYDAROV, G.A., inzh.; BELYAYEV, B.I., inzh.; LEVIN, L.I., inzh.; RYABOV, A.F., inzh.; SAKHNOVSKIY, M.M., kand. tekhn. nauk; CHESNOKOV, A.S.; SHILOVTSEV, D.P.; GAY, A.F., kand. tekhn.nauk, nauchn. red.; GORDEYEV, P.A., red.; GOL'BERG, T.M., tekhn. red.; RODIONOVA, V.M., tekhn. red.

[Manufacture of steel structures] Izgotovlenie stal'nykh konstruktsii. Moskva, Gosstroiizdat, 1963. 401 p. (MIRA 16:8)

(Steel, Structural)

SHTABNITSKIY, S.S.; RYABOV, A.F., redaktor; KRASIL'SHCHIK, S.I., redaktor; TOKER, A.M., tekhnicheskiy redaktor.

[Booklet on safety measures for workers engaged in loading and unloading operations and in the assembling of steel structures] Pamiatka po tekhnike bezopasnosti dlia rabochikh, zaniatykh pogruzochno-razgruzochnymi rabotami, i raznorabochikh pri montazhe stal'nykh konstruktsii. Moskva, Gos. izd-vo lit-ry po stroitel'stvu i arkhitekture, 1954. 31 p. (MIRA 7:9)

1. Russia (1923- U.S.S.R.) Ministerstvo stroitel'stva. Otdel tekhniki bezopasnosti i promyshlennoy sanitarii.
(Loading and unloading--Safety measures)

RYALOV, Aleksandr Fedorovich; CHESNOKOV, A.S., nauchnyy red.; GILLER, Ye.M., nauchnyy red.; OSTROVA, I.M., red.; VLADIMIROVICH, A.G., red.; TOKER, A.M., tekhn.red.

[Making steel construction elements] Izgotovlenie stal'nykh konstruktsii. Izd.2., perer. i dop. Moskva, Vses.uchebno-pedagog. izd-vo Trudrezervizdat, 1958. 367 p. (MIRA 12:3)
(Steel, Structural)

SHILOVTSEV, D.P.; RYABOV, A.E., inzhener, nauchnyy redaktor; BEGAK, B.A., redaktor; PERSON, M.N., tekhnicheskiy redaktor.

[Technology of factory-made steel structures] Tekhnologiia zavodskogo izgotovleniia stal'nykh konstruktsii. Moskva, Gos. izd-vo lit-ry po stroit. i arkhitekture, 1954. 246 p. (MLRA 8:1)
(Building, Iron and steel) (Building materials industry)

RYABOV, A.F.

[redacted]

Chamfering teeth of cylindrical pinions. Mashinostroitel' no.3:28-29 Mr '57. (MLRA 10:5)

(Gear-cutting machines)

RYABOV, A.G.

0

NB

MATWJEJITSCHEW, and A. G. RJABOW. "*Rekonstruktion eines Hochofens im Schnellbauverfahren.*" Übersetzung aus dem Russischen. 8vo, pp. 195. Illustrated. Berlin 1954: Verlag Technik. (Price DM. 28.–).

Translation of Title: Reconstruction of a Blast-Furnace in Rapid-Construction Process.

GRATSIANSKIY, N.N.; RYABOV, A.K.

Surface phenomena during the corrosion of solid solutions of metals. The system Cd-Hg [with summary in English]. Zhur.fiz. khim. 33 no.2:487-491 F '59. (MIRA 12:4)

1. Institut obshchey i neorganicheskoy khimii, Kiyev.
(Cadmium-mercury alloys--Corrosion)
(Surface chemistry)

RYABOV, A.I.; ISAKOVA, Ye.A., inzhener; GUSEV, V.N., bukhgalter

Introduction of local economic accountability of the office of the works superintendent. Transp. stroi. 12 no.6:7-8 Je '62. (MIRA 15:6)

1. Nachal'nik stroitel'no-montazhnogo poyezda No.184 tresta Kaztransstroy (for Ryabov).
(Construction industry--Accounting)

RYABOV, A.I.

Excerpta Medica Sec 9 Surgery Vol. 9/6 June 55

C. APPENDIX

3078. RYABOFF A.I. *Statistical analysis of operations for acute appendicitis (Russian text) SOVETSK. MED. 1954, 6 (16-18) Tables 5

Among 2,285 operations 2,029 were for acute, and 256 for chronic cases. The cases are subdivided as follows: catarrhal 1,444 (71.%), phlegmonous 436 (21.5%), gangrenous 95 (4.3%) and perforated 54 (2.7%). Among the 2,029 cases of acute appendicitis, there were 2 deaths (0.098%). Both were operated upon on the 5th or 6th day. The delay was to be attributed to erroneous diagnosis. As regards complications, there were 2 cases with occlusion, 2 with pneumonitis and 2 with non-healing of the wound. From the statistical analysis it appears that appendicitis occurs twice as frequently in women as in men. The average hospital stay was 29.1 days in 1950, 27.9 days in 1951 and 27.5 days in 1952. Among the 2,285 cases operated on, there

3078 CONT.

were 41 in whom the wound was left open for a rubber drain or a gauze drain of Mikulicz type; in all others the wound was sutured completely. Suppuration of the wound occurred 87 times (3,8%); in purulent or gangrenous forms furazin powder was applied directly to the peritoneum. Parenti - Ferrara

**RYABOV, A.I.**

Statistical analysis of acute appendectomies. Sov.med. 18 no.6:
16-18 Je '54. (MLRA 7:6)

1. Iz khirurgicheskogo otdeleniya (zav.-kandidat meditsinskikh
nauk F.N.Slipenko) bol'nitsy No 30g. Gor'kogo (Glavnyy vrach
A.I.Ryabov, konsul'tant - prof. B.A.Korolev)
(APPENDICITIS, surgery
*statist., Russia)

RYABOV, A.K.; GRATSIANSKIY, N.N.

Effect of small admixtures of metals on the physicochemical properties of zinc coatings. Ukr. khim. zhur. 30 no.8:883-886 '64. (MIRA 17:11)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

RYABOV, A.K.

Effect of aluminum and silumin on the properties of zinc coatings.
Ukr.khim.zhur. 28 no.2:260-262 '62. (MIRA 15:3)

1. Institut obshchey i neorganicheskoy khimii AN USSR.
(Zinc plating) (Aluminum) (Silumin)

ZHANTEMIROV, S.D.; gornyy inzh; RYABOV, A.K., gornyy inzh.

Ways of increasing the efficiency of truck haulage in open pits.
Gor. zhur. no.7:15-17 Jl '62. (MIRA 15:7)

1. Sokolovsko-Sarbayskiy gorno-obgatitel'nyy kombinat.
(Kustanay Province—Mine haulage)

S/073/63/029/004/002/003
A057/A126

AUTHORS: Gratsianskiy, N.N., Ryabov, A.K., Tobolich, V.V.

TITLE: Surface phenomena in the corrosion of solid metal solutions. The system Pb — Tl

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, v. 29, no. 4, 1963, 408 - 410

TEXT: In continuation of earlier investigations (Zh. fiz. khim., v. 33, no. 2 and 6, 1959) the surface tension $\sigma$ of liquid Pb - Tl solution and the pure components were measured in dependence on the concentration of the components, and the surface activity of the components in relation to each other was determined. The alloys were prepared in a vacuum from pure Pb and Tl and the value $\sigma$ measured in a vacuum-gravitation apparatus with special capillaries. The structural diagram Tl - Pb shows that with an addition of Tl to Pb, $\sigma$ rises up to 30 at% Tl. The minimum $\sigma$ corresponds to the composition of the transition from $\sigma$- to the $\gamma$-phase. The maximum is at the ratio Tl : Pb = 2 : 1, and a second minimum at a composition corresponding to the transition from the $\gamma$- to the $\beta$-modification. Addition of Pb to Tl causes a sharp drop of the surface

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Surface phenomena in the corrosion of solid .... S/073/63/029/004/002/003
A057/A126

tension of thallium. Hence, in this system lead is the surface-active component. In corrosive media, where lead is more resistant than thallium, the former will diffuse to the limit alloy - corrosion medium and promote the formation of a corrosion resistant surface layer. The surface tension of pure thallium at 390°C was determined to be 507 erg/cm$^2$. There is 1 figure.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN USSR (Institute of General and Inorganic Chemistry of the AS UkrSSR)

SUBMITTED: June 23, 1962

Card 2/2

GRATSIANSKIY, N.N.; RYABOV, A.K.; TOBOLICH, V.V.

[redacted]

Surface phenomena during corrosion of solid solutions of metals. Pb - Tl system. Ukr. khim. zhur. 29 no.4:408-410 '63. (MIRA 16:6)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.
(Lead-thallium alloys—Corrosion)
(Surface chemistry)

RYABOV, A.K.; GRATSIANSKIY, N.N.

Effect of small additions of metals on surface phenomena during the process of hot zinc plating. Report No. 1. Ukr. khim. zhur. 28 no.1:121-124 '62. (MIRA 16:8)

1. Institut obshchey i neorganicheskoy khimii.

5 (4)

SOV/76-33-6-13/44

AUTHORS: Gratsianskiy, N. N., Ryabov, A. K.

TITLE: Surface Phenomena in the Corrosion of Solid Metal Solutions (Poverkhnostnyye yavleniya pri korrozii tverdykh rastvorov metallov). The System In - Pb (Sistema In - Pb)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 6, pp 1253-1255 (USSR)

ABSTRACT: In continuation of a previous paper (Ref 1) wherein the surface tension $\sigma$ of the system Cd - Hg was determined, the present paper reports on the measurement of the value $\sigma$ of the solid solution In - Pb as depending on the composition of the alloy. It further deals with the problem, which of the two components is the surface active factor at the boundary with a corrosion medium, and what kind of influence it exerts on the corrosion resistance of the alloy surface layer. Measurements of $\sigma$ were made in a vacuum apparatus at temperatures 30-50° over the melting point of the alloy and of the specific weight $\gamma$ in a special vessel (Ref 1). The values for $\sigma$ and $\gamma$ with different alloy compositions are given in a table. The value $\sigma$ for pure In at 185° C amounts to 592 erg/cm$^2$, and for

Card 1/2

Surface Phenomena in the Corrosion of Solid Metal SOV/76-33-6-13/44
Solutions. The System In - Pb

Pb at 362° = 455 erg/cm$^2$. It was observed that $\sigma$ in the case of a content of 40-100 at% Pb changes but little (164-175 erg/cm$^2$) a marked change is observed with 30 at% Pb, the transition point of the $\beta$- to the $\gamma$-phase in the phase transformation diagram. From a content below 5 at% Pb $\sigma$ rises up to the value for pure In. In the surface layer of the system In - Pb, at the boundary with a corrosion medium (citric acid), In is the surface-inactive component. The diffusion of the surface-active Pb to the boundary alloy - corrosion medium effects the formation of an anticorrosive lead layer or of the In-Pb alloy. There are 1 figure, 1 table, and 4 Soviet references.

ASSOCIATION: Akademiya nauk USSR, Institut obshchey i neorganicheskoy khimii Kiyev (Academy of Sciences of the UkrSSR, Institute of General and Inorganic Chemistry, Kiyev)

SUBMITTED: October 28, 1957

Card 2/2

SANDRIGAYLO, N.F.; RYABOV, A.K.

Waste rock disposal operations. Gor.zhur. no.2:22-25 F '64.
(MIRA 17:4)

RYABOV, A.K., gornyy inzh.; GOL'SHTEYN, A.G., gornyy inzh.

Mine haulage in strip mining. Gor.zhur. no.2:17-20 F '64.
(MIRA 17:4)

GRATSIANSKIY, N.N.; RYABOV, A.K.; TOBOLICH, V.V.

Effect of small additions of metals on the surface phenomena during hot lead plating. Report No.2. Ukr. khim. zhur. 29 no.11:1219-1222 '63. (MIRA 16:12)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

GRATSIANSKIY, N.N.; RYABOV, A.K.

Corrosion resistance of solid metal solutions in the system nickel-chromium. Ukr. khim. zhur. 26 no.2:201-205 '60.
(MIRA 13:9)

1. Institut obshchey i neorganicheskoy khimii AN USSR.
(Nickel-chromium alloys—Corrosion)

S/073/60/026/002/009/015
B023/B067

AUTHORS: Gratsianskiy, N. N. and Ryabov, A. K.

TITLE: Study of the Corrosion Resistance of Solid Solutions of Metals of the Nickel - Chromium System

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, 1960, Vol. 26, No. 2, pp. 201-205

TEXT: The authors attempted to determine the limits of corrosion resistance of metals of the nickel-chromium system in numerous corroding solutions, and to explain the reasons of the strong changes in the corrosion resistance of melts in connection with the changes of the composition. Corrosion resistance was studied in the following solutions: 5% HCl, $H_2SO_4$, $Na_2SO_4$, 3% NaCl at 20°C during 300 h. In $H_2SO_4$, $Na_2SO_4$, and NaCl all melts proved to be corrosion resistant with all relationships of the components. In the 5% HCl solution the corrosion losses are rapidly changed with a nickel content of about 10%. With a nickel content exceeding 10% in 5% HCl solution an approximately 0.2μ thick corrosion

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Study of the Corrosion Resistance of Solid Solutions of Metals of the Nickel - Chromium System

S/073/60/026/002/009/015
B023/B067

resistant surface layer of pure nickel is formed. On the phase diagram of the nickel - chromium system the development of limits of corrosion resistance in a 5% HCl solution corresponds to the transition from the $\alpha$-phase to the $\alpha + \gamma$-phase. Fig. 1 shows the dependence of the corrosion losses in 5% HCl solution on the composition of the melt. Table 1 gives investigation results concerning the losses in weight in 5% HCl. Table 2 shows the results of the analysis of solutions after corrosion in 5% HCl:

Table 2 corrosion of Ni-Cr alloys in 5% HCl

| alloy No. | | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|
| dissolved | Ni | traces | traces | traces | 2.8 | 0.1 | 0.2 |
| at % | Cr | 99.92 | 99.94 | 99.95 | 97.2 | 99.9 | 99.8 |

alloy 5 23.0 at% Ni,
- " - 6 18.1 - " -
- " - 7 13.8 - " -
- " - 8 8.95 - " -
- " - 9 3.97 - " -
- " -10 1.36 - " -

There are 2 figures, 2 tables, and 2 Soviet references.

Card 2/3

Study of the Corrosion Resistance of Solid Solutions of Metals of the Nickel - Chromium System

S/073/60/026/002/009/015
B023/B067

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN USSR (Institute of General and Inorganic Chemistry of the Academy of Sciences UkrSSR)

SUBMITTED: July 31, 1958

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Card 3/3

36293
S/073/62/020/002/005/006
B101/B110

1.1500

AUTHOR: Ryabov, A. K.

TITLE: Effect of aluminum and Silumin on the properties of zinc coatings

PERIODICAL: Ukrainskiy khimicheskiy zhurnal, v. 20, no. 2, 1962, 260-262

TEXT: The differences in coatings of pure Zn (I), of Zn containing 0.3% by weight of Al (II), and of Zn containing 0.35% by weight of Silumin (III) on iron were studied. The experiments were made in a high-purity graphite container at exactly maintained temperature (464-520°C) and duration. Results:

| | | | |
|---|---|---|---|
| I | Bath temperature, °C | 475 | |
| | Duration, sec | 10 | 20 |
| | Thickness of coating, μ | 25.7 | 31.2 |
| II | Bath temperature, °C | 464 | |
| | Duration, sec | 10 | 20 |
| | Thickness, μ | 16.6 | 14.7 |

The thickness of the coatings was determined gravimetrically before and after dissolution in an electrolyte composed of 10 parts by weight of $ZnSO_4$, 20 parts by weight of NaCl, and

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S/073/62/028/002/005/006
B101/B110

Effect of aluminum and Silumin ...

| | | |
|---|---|---|
| III Bath temperature, °C | 468 | |
| Duration, sec | 10 | 20 |
| Thickness, μ | 12.4 | 14.4 |

100 parts by weight of $H_2O$, at an anodic current density of 6 a/dm². The potential curves were recorded, and the time was determined, within which the iron potential was reached. The course of the potential curves suggests the presence of Zn - Fe compounds. Results obtained for I: slow variation in potential and salient points in the curve owing to successive dissolution of various Zn - Fe compounds; for II: quicker variation in potential; for III: fastest variation in potential and absence of Zn - Fe compounds. These results were confirmed by microstructural analysis. Silumin thus prevents iron from diffusing into zinc and affords a zinc coating with optimum physicochemical and mechanical properties. There are 3 figures and 1 table. The most important English-language reference is: M. L. Hyghes, First international conference on hot dip galvanizing, Oxford, March, 1951.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN USSR (Institute of General and Inorganic Chemistry AS UkrSSR)

SUBMITTED: October 20, 1960

Card 2/2

RYABOV, A.K., inzh.

Limit of the bearing capacity of peat soil under an equally distributed load. Izv.vys.ucheb.zav.; gor.zhur. 5 no.9:37-39 '62. (MIRA 15:11)

1. Kalininskiy torfyanoy institut. Rekomendovana kafedroy kar'yernykh razrabotok.
(Peat soils--Testing)

RYABOV, A.K., inzh.

Study of the coefficients of viscosity and cohesion of peat soils.
Izv.vys.ucheb.zav.; gor.zhur. 5 no.2:58-61 '62. (MIRA 15:4)

1. Kalininskiy torfyanoy institut. Rekomendovana kafedroy kar'yernykh razrabotok.

(Peat soils)

5(4),18(7)

AUTHORS: Gratsianskiy, N. N., Ryabov, A. K. SOV/76-33-2-39/45

TITLE: Surface Phenomena in the Corrosion of Solid Solutions of Metals (Poverkhnostnyye yavleniya pri korrozii tverdykh rastvorov metallov). System Cd - Hg (Sistema Cd - Hg)

PERIODICAL: Zhurnal fizicheskoy khimii, 1959, Vol 33, Nr 2, pp 487-491 (USSR)

ABSTRACT: Diffusion processes which take place on the surface layers at the boundary between solid metal solutions and the corrosion medium can lead to the formation of a corrosion-resistant layer as well as an intensification of the destruction by corrosion of the alloy (Ref 1). In the case that the surface-active component is a corrosion-resistant element a passivation of the surface and a partial inhibition of the dissolution process take place. In order to take into consideration the effect of the surface-active component the surface tension $\sigma$ must be determined in its dependence upon the composition. The value for $\sigma$ is best determined at the boundary between the melted metal and its metal vapor. In the work reported here the determinations were carried out on the system Cd-Hg at a

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temperature 30° above the melting points of the metals and above the flow temperature of the alloy and at the phase boundary (with metal vapor). The following compositions were investigated (given in weight %): pure Hg, Cd - 1.0%, Cd - 5.0%, Cd - 25.0%, Cd - 40.0%, Cd - 49.5%, Cd - 60.0%, Cd - 75.0%, and pure Cd. The vacuum apparatus (Fig 1) with which the $\sigma$-measurement was carried out is similar to the gravitation apparatus according to P. P. Pugachevich (Ref 2). The value obtained for $\sigma$ was calculated using the equation of Kontor, which was completed by B. I. Bering and N. L. Pokrovskiy (Ref 3), and a value of 487 erg/cm$^2$ was found for Hg at -10°C and 586 erg/cm$^2$ for Cd at 350°C. While in alloys rich in cadmium an increase in the mercury content from 0 to 30 atom% changes only inconsiderably the value for $\sigma$ (of 586-587 erg/cm$^2$), the alloys rich in mercury showed an increase of the $\sigma$ value from 487 to 558 erg/cm$^2$ with an increase in the cadmium content from 0 to 55 atom%. The point of transition from the $\alpha$ to the $\beta$ phase, which occurs with a mercury content of 35 atom%, was at

Surface Phenomena in the Corrosion of Solid Solutions of Metals. System Cd - Hg

SOV/76-33-2-39/45

$\sigma$ = 618 erg/cm$^2$. Since mercury in the Cd - Hg system is both a surface-active component and an element which causes resistance to corrosion (Ref 3) a passivation film forms quickly in this case. There are 3 figures, 1 table, and 3 Soviet references.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii, Kiyev (Institute of General and Inorganic Chemistry, Kiyev)

SUBMITTED: August 8, 1957

Card 3/3

RYABOV, A. K., Cand Tech Sci -- "Study of the physico-mechanical parameters of peat in connection with the stability of the peat ~~deposit~~ bed." Mos, 1961. (Min of Higher and Sec Spec Ed RSFSR) (KL, 8-61, 248)

RYABOV, A.L., polkovnik zapasa; IVANOV, V.V., polkovnik zapasa; FILIPPOV, I.A., polkovnik; VOROB'YEVA, P.A., polkovnik, red.; STREL'NIKOVA, M.A., tekhn.red.

[Field artillery manual for commanders of reserve planoots] Spravochnik komandira vzvoda zapasa nasemnoi artillerii. Moskva, Voen.izd-vo M-va obor. SSSR, 1957. 319 p. (MIRA 11:2)
(Artillery, Field and mountain)

RYABOV, A.M.

[Good yields of cucumbers] Vysokie urozhai ogurtsov. Lenizdat,
1958. 41 p. (MIRA 12:2)
(Cucumbers)

SHANUPENKO, I.A., kand. med. nauk.; RYABOV, A.M.

Problem of treatment of suppurative pericarditis. Sov. med. 22 no.12: 108-114 D '58. (MIRA 12:1)

1. Iz 4-y kafedry khirurgii (zav. - prof. V.I. Kazanskiy, nauchnyy rukovoditel' - prof. T. P. Makaranko) TSentral'nogo instituta usovershenstvovaniya vrachey na baze TSentral'noy klinicheskoy bol'nitsy (nachal'nik V.N. Zakharchenko) Ministerstva putey soobshcheniya SSSR.

(PERICARDITIS, ther.
suppurative (Rus))

14(5) SOV/92-58-8-23/36

AUTHORS: Ryabov, A.M., Senior Mechanic, and Bychkov, M.S., Senior Operator

TITLE: Mechanized Transportation of Catalyst in a Regenerating Unit (Mekhanizatsiya transportirovki katalizatora na ustanovke regeneratsii)

PERIODICAL: Neftyanik, 1958, Nr 8, pp 26-27 (USSR)

ABSTRACT: The authors state that heaters with an inclined, rotating conduit, as show in Fig. 1, were used in the paraffin department of the Groznyy refinery for the regeneration of spent catalyst from the percolation unit. The spent catalyst was put into the upper hopper manually and the regenerated catalyst was removed from the lower hopper manually. To facilitate the operation the authors of the article proposed introducing a pneumatic transportation of catalyst shown in the simplified flow chart in Fig. 2. The catalyst is moved upwards by an air lift and drops by gravity pull. Cyclones

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Mechanized Transportation of a Catlyst (Cont.) 92-58-8-23/36

are installed in the catalyst regeneration unit to entrap the catalyst dust. From the regeneration unit the catalyst is transported in steel barrels to the percolation unit. There are 2 figures.

ASSOCIATION: Groznenskiy neftepererabatyvayushchiy zavod (The Groznyy refinery)

Card 2/2

RYABOV, A.M.; PUZANOV, O.P.; KHARITONOV, A.A., inzh.; PYATYGO, A.S.

News from factories. Masl.-zhir.prom. 28 no.7:45-47 Jl '62. (MIRA 15:11)

1. Vneshtatnyye korrespondenty zhurnala "Masloboyno-zhirovaya promyshlennost'" (for Ryabov, Puzanov).

(Oil industries)

MAKARENKO, T. P., prof., (Moskva, 1-ya ul. Bebelya, d. 33/35, kv. 53);
RYABOV, A. M.

Prolonged block of the sympathetic trunk of the lumbar segment in treating thrombophlebitis of the deep veins of the lower extremities. Vest. khir. no.2:70-74 '62. (MIRA 15:2)

1. Iz 3-y kafedry khirurgii (zav. - prof. V. I. Kazanskiy) TSentral'nogo instituta usovershenstvovaniya vrachey na baze TSentral'noy klinicheskoy bol'nitsy (nach. - zasluzh. vrach RSFSR V. N. Zakharchenko) Ministerstva putey soobshcheniya.

(PHLEBITIS) (NOVOCAINE)

SHANURENKO, I.A.; RYABOV, A.M.

Experience in the treatment of obliterating endarteritis by the prolonged effect of novocaine on the sympathetic nerve trunk. Vest. khir. 84 no. 2:49-53 F '60. (MIRA 14:1)
(ARTERIES) (LOCAL ANESTHESIA)

RYABOV, A.I., inzh.

Use of tar oil. Masl.-zhir. prom. 27 no.7:41 Jl '61.
(MIRA 14:7)

1. Gor'kovskiy maslozhirovoy kombinat imeni S.M. Kirova. Vneshtatnyy korrespondent zhurnala 'Maslozhirovaya promyshlennost'.

(Tar oils)

RYABOV, A.M. (Moskva, Volokolamskoye shosse, d.34, korpus 5, kv.39)

Needle-trocar for supplying a drainage catheter to the sympathetic ganglia. Nov. khir. arkh. no.3:96-100 My-Je '60. (MIRA 15;2)

1. Kafedra khirurgii IV (zav. - prof. V.I.Kazanskiy) TSentral'nogo instituta usovershenstvovaniya vrachey na baze tsentral'noy klinicheskoy bol'nitsy Ministerstva putey soobshcheniya.
(DRAINAGE, SURGICAL)

RYABOV, Aleksandr Mikhaylovich; LEBEDEV, V.A., red.; TRESHOVA, V.A., tekhn. red.

[Cucumbers; practices in growing cucumbers on specialized state farms] Ogurtsy; opyt vyrashchivaniia ogurtsov v spetsializirovannykh sovkhozakh. Leningrad, Lenizdat, 1961. 30 p. (MIRA 15:7)

(Leningrad Province—Cucumbers)

RYABOV, A.N., inzh.; SEROV, Ye.P., kand.tekhn.nauk

Evaluating the reliability of natural circulation during pressure drop. Teploenergetika 7 no.10:37-39 O '60. (MIRA 14:9)

1. Moskovskiy energeticheskiy institut.
(Boilers) (Steam engineering)

GORYUNOV, A.A.; RYABOV, A.N.

New method of dissolving ruthenium. Zhur.neorg.khim. 10 no.12:2596-2601 D '65. (MIRA 19:1)

NIK[illegible], [illegible]B.; RYABOV, A.N.

Thermodynamic properties and stability of ruthenium and osmium oxides. Zhur. neorg. khim. 10 no.1:3-9 Ja '65. (MIRA 18:11)

1. Leningradskiy gosudarstvennyy universitet, kafedra neorganicheskoy khimii. Submitted May 5, 1964.

RYABOV, A.N., inzh.; BERZINA, B.F., inzh.

Generalization on experimental data on critical thermal loads in the forced motion of underheated liquid in cylindrical pipes. Teploenergetika 11 no.2:81-87 F '64. (MIRA 17:4)

NIKOL'SKIY, A.B.; RYABOV, A.N.

Determination of the heat of formation of ruthenium tetroxide. Zhur. neorg.khim. 9 no.1:7-11 Ja '64. (MIRA 17:2)

L 10643-63
EWP(q)/EWT(m)/BDS--AFFTC/ASD--JD

S/0078/63/008/006/1543/1545
54

ACCESSION NR: AP3001231

AUTHOR: Kolbin, N. I.; Ryabov, A. N.; Samoylov, V. M.

TITLE: Solid ruthenium tetrachloride

SOURCE: Zhurnal neorganicheskoy khimii, v. 8, no. 6, 1963, 1543-1545

TOPIC TAGS: RuCl sub 4, RuCl sub 3

ABSTRACT: Solid RuCl sub 4 was obtained by condensing onto a liquid air-cooled surface the vapors of Ru chlorides and chlorine obtained by heating RuCl sub 3 in fused quartz equipment in a stream of chlorine at 750 degrees. RuCl sub 4 decomposes to the trichloride and chlorine at -30 degrees; the reaction is not reversible at this temperature. Orig. art. has: 1 table; 1 figure; 1 equation.

ASSOCIATION: none

SUBMITTED: 16Aug62
DATE ACQD: 01Jul63
ENCL: 00

SUB CODE: 00
NO REF SOV: 003
OTHER: 001

deo/CL
Card 1/1

RYABOV, A.N.; NIKOL'SKIY, A.B.

Reaction of ruthenium tetraoxide with ammonia. Zhur.neorg.khim. 8 no.9:2213 S '63. (MIRA 16:10)

1. Leningradskiy gosudarstvennyy universitet, kafedra neorganicheskoy khimii.

KOLBIN, N.I.; RYABOV, A.N.; SAMOYLOV, V.M.

Solid ruthenium tetrachloride. Zhur. neorg. khim. 8 no.6: 1543-1545 Je '63. (MIRA 16:6)

(Ruthenium chlorides)

ZVYAGINTSEV, Orest Yevgen'yevich, prof., doktor khim. nauk; AVTOKRATOVA, Tat'yana Dmitriyevna, kand. khim. nauk, dots.; GORYUNOV, Anatoliy Alekseyevich, kand.khim. nauk, assistent; KOLBIN, Nikolay Ivanovich, kand.khim.nauk, dots.; RYABOV, Al'ber Nikolayevich, kand. khim. nauk, assistent; KORCHEMNAYA, Ye.K., red.

[Chemistry of ruthenium] Khimiia ruteniia. [By] O.E.Zviagintsev i dr. Moskva, Nauka, 1965. 299 p. (MIRA 18:6)

1. Leningradskiy gosudarstvennyy universitet im. A.A.Zhdanova (for Kolbin, Ryabov, Goryunov). 2. Moskovskiy institut stali i splavov(for Avtokratova).

RYABOV, A. N.

Dissertation defended for the degree of Candidate of Chemical Sciences at the Institute of General and Inorganic Chemistry imeni N. S. Kurnakov in 1962:

"Binary Compounds of Ruthenium with Chlorine, Bromine, and Iodine."

Vest. Akad. Nauk SSSR. No. 4, Moscow, 1963, pages 119-145

S/078/60/005/009/019/040/XX
B017/B058

AUTHORS: Shchukarev, S. A. and Ryabov, A. N. 21

TITLE: Heat of Formation of Ruthenium Dioxide

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 9, pp. 1931 - 1933

TEXT: The heat of formation of $RuO_2$ was determined by calorimetric measurements. All experiments were conducted at 25°C and a pressure of 30 atm. The heat of formation amounts to -73± 1 kcal/mole. ✓ Only $RuO_2$ and metallic ruthenium were detected by X-ray examinations (determined according to Chugayev by means of thiourea) in the combustion products of ruthenium. The formation of $RuO_4$ in the combustion products was not ascertained. The data by Remy and Kühn (1) on the heat of formation of $RuO_2$ (-59.5 kcal/mole) must be described

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Heat of Formation of
Ruthenium Dioxide

S/078/60/005/009/019/040/XX
B017/B058

as being wrong. The free energy for the formation of $RuO_2$ is given as $\Delta F^{\circ}_{\text{formation } RuO_2} = -60.6$ kcal/mole. There are 1 table and 4 references: 3 Soviet and 1 German.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet Kafedra neorganicheskoy khimii (Leningrad State University, Chair of Inorganic Chemistry)

SUBMITTED: June 25, 1959

Card 2/2

RYABOV, A. N.

Cand Chem Sci, Diss -- "Binary compounds of ruthenium with chlorine, bromine and iodine". Moscow, 1961. 23 pp, 20 cm (Inst of Gen and Inorg Chem imeni N. S. Kurnakov, Acad of Sci USSR), 180 copies, Not for sale (KL, No 9, 1961, p 177, No 24283). [61-51128]

MODZELEVSKIY, Aleksandr Aleksandrovich; NOVIKOV, M.P., kand. tekhn. nauk,
red.; POLUYANOV, V.T., inzh., red.; RYABOV, A.N., inzh., red.;
SUSTAVOV, M.I., inzh., red.; FEDOROV, B.F., kand. tekhn. nauk,
red.; DELYUKIN, L.N., red. izd-va; DUGINA, N.A., tekhn. red.

[Technological processes in assembling movable joints] Tekhnologiia sbornki podvizhnykh soedinenii. Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1961. 71 p. (Biblioteka slesaria-sborshchika, no.7) (MIRA 14:11)

(Couplings) (Machine-shop practice)

RUDIN, Sil'vestr Nikolayevich, inzh.; LUKOVTSEV, A.A., inzh., red.; PETUKHOV, P.Z., doktor tekhn.nauk, red.; RYABOV, A.N., inzh., red.; SUSTAVOV, M.I., inzh., red.; KHRISANOV, M.I., kand.tekhn.nauk, red.; SARAFANNIKOVA, G.A., red.; DUGINA, N.A., tekhn.red.

[Assembly tools] Montazhnye instrumenty. Moskva, Gos.nauchno-tekhn. izd-vo mashinostroit.lit-ry, 1960. 127 p. (Bibliotechka slesaria-montazhnika, no.7). (MIRA 14:2)

(Machinists' tools)

SHCHUKAREV, S.A.; KOLBIN, N.I.; RYABOV, A.N.

Ruthenium tribromide. Zhur. neorg. khim. 5 no.8:1900-1901 Ag '60.
(MIRA 13:9)

1. Leningradskiy gosudarstvennyy universitet, Kafedra neorganicheskoy khimii.
(Ruthenium bromide)

[illegible], [illegible].I.; RYABOV, A.N.

Modifications of ruthenium trichloride. Vest. LGU 14 no.22:121-127 '59. (MIRA 12:11)

(Ruthenium chloride)

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5.4130
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66883
SOV/54-59-4-15/22

AUTHORS: Kolbin, N. I., Ryabov, A. N.

TITLE: On the Modifications of Ruthenium Trichloride

PERIODICAL: Vestnik Leningradskogo universiteta. Seriya fiziki i khimii, 1959, Nr 4, pp 121-127 (USSR)

ABSTRACT: The authors first discuss publications on ruthenium modifications with reference to Klaus (Ref 1) et al. $RuCl_3$ was obtained by some research workers in two modifications, i.e. in the form of small black, lustrous plates and cinnamon-colored powders. However, the development and the properties of these modifications have not yet been fully explained. Thus, the authors carried out the present investigation. The production of ruthenium trichloride from metallic ruthenium in dry $Cl_2$ current was studied in the temperature range 280-840°C. The metallic ruthenium was obtained from $RuCl_3$ by dechlorination with the aid of $H_2$. Two methods were employed: 1) Sample in quartz shuttle and quartz tube. 2) Glass tube in the form of a pipette. The second method was more convenient. The resultant chlorides were analyzed by dechlorination with hydrogen and by determination of the

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On the Modifications of Ruthenium Trichloride SOV/54-59-4-15/22

quantity of the separated HCl. Moreover, the authors took Debye powder patterns and electron diffraction pictures. In dependence on temperature, the authors obtained either the cinnamon-colored powder (below 500°C) or the small black plates (above 500°C). In the case of incomplete dechlorination, the $RuCl_3$ lines were still observed in the X-ray picture in addition to metallic Ru. This indicated the presence of a mixture of the two substances and not the formation of low-valence Ru chlorides (as e.g. $Ru_2Cl_5$). In the case of a chlorination of up to Ru:Cl = 2:5, no metal lines were observed any longer. The authors attempted to explain this by the electron diffraction pictures (plotting and discussion by K. V. Ovchinnikov). Three modifications were observed by an investigation of $RuCl_3$ sublimated over the cold parts of the apparatus. These are the black plate modification ($\alpha$) at formation temperatures of about 600°C, below a dark-cinnamon-colored powder modification, and above 700°C once again a cinnamon, woolly modification, which radiographically corresponded to the $\beta$-modification developing at 500°C. The dark, cinnamon modification was strongly hygroscopic, and, contrary to the other modifications, it was readily soluble in water.

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On the Modifications of Ruthenium Trichloride SOV/54-59-4-15/22

The X-ray studies have shown that the third modification is probably amorphous (for data see table 1). The structure of the α-modification was determined by Ye. V. Stragonov and Ovchinnikov. Investigations of the phase transitions (Fig 3: heating curves), indicated a direct transition of the β-phase into the α-phase at 600°C. From density determinations by means of a pycnometer the authors obtained a value of 3.90 g/cm³ for the α-modification (Table 3), which is in contradistinction to reference 8 (3.11). The density of the β-modification and the amorphous modification was determined for the first time in this investigation. There are 3 tables and 12 references, 2 of which are Soviet.

4

SUBMITTED: May 25, 1959

Card 3/3

83329

26.3140
26.4400

S/096/60/000/010/003/022
E194/E184

**AUTHORS:** Ryabov, A.N. (Engineer), and
Serov, Ye.P. (Candidate of Technical Sciences)

**TITLE:** Evaluating the Reliability of Natural Circulation during Pressure Reduction

**PERIODICAL:** Teploenergetika, 1960, No 10, pp 37-39

**TEXT:** Recently a number of works have been published on the theory of transient conditions of natural circulation. In all of them the analysis is based on the concept that the process is quasi-stationary and they differ mainly in the method of assessing the reliability of circulation. The previous work is briefly considered and it is stated that although in some cases the question is correctly formulated the desire to arrive at simple formulae has led to the introduction of a number of unjustified assumptions. In calculations of transient conditions the influence of both the rising and the falling tubes must be considered because when the pressure drops more steam is generated in the circuit which increases the resistance of the downflow tubes and also alters the effective head. The overall effect depends on the relationship between the change in the useful head and the resistance of the downflow tubes.

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S/096/60/000/010/003/022
E194/E184

Evaluating the Reliability of Natural Circulation during Pressure Reduction

Calculations of the circulation on this basis are very cumbersome but fully allow for the special features of the transient process of circulation. It is accordingly assumed that the main equations of circulation obtained during steady state conditions also remain true when the pressure alters in the boiler. On this basis Eqs (1) and (2) are written. In determining the useful head and the resistance of the downflow tube it is assumed that the rate of pressure drop is constant at all points of the circuit and inertia forces are not allowed for. The additional heat that the tubes receive when the pressure drops is given by Eqs (3) and (4). It is assumed that the metal gives up its heat without delay and the referred speed of the steam at the outlet from the downflow tube is then given by Eq (5). The corresponding speed for the rising tubes is given by Eq (6). It will be seen that these speeds depend among other things on the rate of change of pressure. When a steam-water mixture moves in the downflow system the corresponding head is given by Eq (7) and the various resistances concerned are given by Eqs (8)-(10). The relationship between the useful head and the

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S/096/60/000/010/003/022
E194/E184

Evaluating the Reliability of Natural Circulation during Pressure Reduction

resistance and the rate of change of pressure is given by Eq (11). The circulation equations (1) and (2) are solved graphically in the ordinary way for each rate of pressure drop. Fig 1 shows a graph of change of useful head in the circulation contour for various rates of pressure drop. The shape of the curve is discussed. A graphical solution of the circulation equation for a certain rate of pressure drop is plotted in Fig 2. It will be noted that there are two points of intersection of the curves of useful head and resistance of the downflow system, but only the uppermost of these is a stable condition. The criterion of the reliability of circulation, as under steady state conditions, should be sought under conditions of combined operation of tubes connected in parallel subjected to different heating. Fig 3 shows a graph of the changes in the circulation characteristics as function of the rate of circulation both for the contour as a whole and for an individual tube with reduced heating. The shape of the curve is discussed and the conditions under which circulation failure occurs in the lightly heated tube are explained. The maximum permissible rate of pressure

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83329

S/096/60/000/010/003/022
E194/E184

Evaluating the Reliability of Natural Circulation during Pressure Reduction

There are 4 figures and 6 references; 5 Soviet and 1 German.

ASSOCIATION: Moskovskiy energeticheskiy institut
(Moscow Power Institute)

Card 5/5

NOVIKOV, O.I.; MAKARENYA, A.A.; RYABOV, A.N.; SUVOROV, A.V.

Improved circulation method of determining the dissociation pressure. Izv. vys. ucheb. zav; khim. i khim. tekh. 3 no. 5:952-958 '60. (MIRA 13:12)

1. Leningradskiy gosudarstvennyy universitet. Kafedra obshchey i neorganicheskoy khimii.
(Gases--Analysis)

5(2)

SOV/78-4-7-41/44

AUTHORS: Shchukarev, S. A., Kolbin, N. I., Ryabov, A. N.

TITLE: On a Volatile Higher Chloride of Ruthenium (O letuchem vysshem khloride ruteniya)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 7, pp 1692-1693 (USSR)

ABSTRACT: The authors found in the course of the chlorination of metallic ruthenium by means of chlorine gas that amorphous $RuCl_3$ is deposited at the cold places of the apparatus. As the vapor pressure of $RuCl_3$ is negligibly low at the temperature of 400° used, this cannot concern the evaporation of $RuCl_3$. The formation of $RuCl_4$ is assumed and its vapor pressure is calculated from the difference between the $RuCl_3$ carried away in the nitrogen- and in the chlorine current. The investigation is being continued. There are 1 figure and 2 references, 1 of which is Soviet.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet im. Zhdanova, Kafedra neorganicheskoy khimii (Leningrad State University imeni

Card 1/2

SOV/78-4-7-41/44

On a Volatile Higher Chloride of Ruthenium

Zhdanov, Chair for Inorganic Chemistry)

SUBMITTED: February 23, 1959

Card 2/2

AUTHORS: Shchukarev, S. A., Kolbin, N. I., Ryabov, A. N. SOV/78-3-8-1/48

TITLE: On the Dissociation- and Sublimation Tension of Ruthenium-(III)-Chloride (Ob uprugosti dissotsiatsii i sublimatsii trikhlorida ruteniya)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol. 3, Nr 8, pp. 1721-1726 (USSR)

ABSTRACT: $RuCl_3$ is produced by chlorination of finely powdered metallic ruthenium with chlorine. For the determination of the dissociation- and sublimation tension of $RuCl_3$ three methode have been used.

1) Static method with buffer - concentrated sulfuric acid.
2) Method of the quartz membrane.
3) Dynamically with nitrogen as carrier gas.

The dissociation tension of solid ruthenium-(III)-chloride at temperatures of 773-1058°K was calculated. From these data the variation of the thermodynamic functions with the dissociation of ruthenium-(III)-chloride was found:

$\Delta H_{298} = 49 \pm 2$ kcal, $\Delta F_{298} = 35 \pm 2$ kcal, $\Delta S_{298} = 47 \pm 2$ e.ye.

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On the Dissociation- and Sublimation Tension of Ruthenium-(III)-Chloride SOV/78-3-5-[illegible]

The sublimation of $RuCl_3$ was determined at 850-1100°K. On the strength of these results the thermodynamic characteristic values of the sublimation process of $RuCl_3$ for the temperature 975°K were calculated: $\Delta H$ = 46 kcal, $\Delta S$ = 41 e.ue. There are 3 figures, 5 tables, and 8 references, 4 of which are Soviet.

ASSOCIATION: Leningradskiy gosudarstvennyy universitet, Kafedra obshchey i neorganicheskoy khimii (State University of Leningrad, Chair of General and Inorganic Chemistry)

SUBMITTED: July 8, 1957

Card 2/2

SHCHUKAREV, S.A.; KOLBIN, N.I.; RYABOV, A.N.

Flexibility of dissociation and sublimation of ruthenium trichloride. Zhur. neorg. khim. 3 no.8:1721-1726 Ag '58. (MIRA 11:9)

1. Leningradskiy gosudarstvennyy universitet, Kafedra obshchey i neorganicheskoy khimii.
(Ruthenium chloride) (Dissociation)
(Sublimation (Physical sciences))

ZIMIN, Arkadiy Pavlovich; IGNATOV, Aleksey Vasil'yevich; RYABOV, A.N., inzhener, retsenzent; YERMAKOV, N.P., tekhnicheskiy redaktor

[Technical essentials for supervisors of machine manufacturing; manual for inspectors in machine shops] Tekhminimum kontrolera-mashinostroitelia; posobie dlia kontrolerov mekhanicheskikh tsekhov. Izd. 3-e, ispr. i dop. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1957. 319 p. (MIRA 10:7)

(Machine-shop practice)

SHCHUKAREV, S.A.; KOLBIN, N.I.; RYABOV, A.N.

Anhydrous ruthenium tribromide. Vest. LGU 16 no.4:100-104 '61.
(MIRA 14:3)

(Ruthenium bromide)

SHCHUKAREV, S.A.; RYABOV, A.N.

Heat of formation of ruthenium dioxide. Zhur.neorg.khim. 5 no.9:
1931-1933 S '60. (MIRA 13:11)

1. Leningradskiy gosudarstvennyy universitet, Kafedra neorganicheskoy khimii.

(Ruthenium oxide)

SHCHUKAREV, S.A.; KOLBIN, N.I.; RYABOV, A.N.

Ruthenium triiodide. Zhur.neorg.khim. 6 no.5:1013-1015 My '61. (MIRA 14:4)

1. Leningradskiy gosudarstvennyy universitet.

(Rrutenium iodide)

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S/120/62/000/004/039/047
E039/E420

AUTHORS: Borisov, V.S., Gol'din, L.L., Goryachev, Yu.M., Grekov, N.N., Ryabov, A.P., Skachkov, S.V., Talyzin, A.N.

TITLE: Measurement of the basic magnetic characteristics of the proton synchrotron C-blocks

PERIODICAL: Pribory i tekhnika eksperimenta, no.4, 1962, 206-212

TEXT: The ratio of the average field to its gradient $\bar{B}/\nabla\bar{B}$ is measured to an accuracy of 0.1% by an absolute method on a number of C-blocks chosen as standard. A comparison is them made with the other blocks. The apparatus consists of three series of six coils mounted on a marble slab 2 m long and 80 x 27 mm$^2$ cross-section and is supported on the two geodetic markers on the blocks. Signals obtained from these coils are proportional to the rate of change of the magnetic field at the orbital position and the difference between the inner and outer coils is proportional to the rate of change of the field gradient. Values of $B/\nabla\bar{B}$ measured on three separate identical coil systems gave the following results: (1) 68.19 mm; (2) 68.05 mm; (3) 68.28 mm giving a mean value of

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68.17 mm. The measurement was repeated using a "point" method with two coils only, one inside and one outside the equivalent orbit. Values of $B/\nabla B$ were made at 19 points in the blocks and at 8 points between blocks for two coil systems. Comparison of results shows: average of first method 68.19 mm; first "point" method value 68.21 mm, second "point" method value 68.40 mm. The high value for the second "point" method is not accounted for and an average of the first two figures is used in calculations. The distribution of the dynamic component of the field and its gradient in the C-blocks and in the gaps between blocks is measured by a compensation method and the residual field by means of a rotating coil. For a field of 5000 gauss

$$\frac{\overline{\nabla B}_{gap}}{\overline{\nabla B}_{block}} = 0.395 \quad \text{and} \quad \frac{\bar{B}_{gap}}{\bar{B}_{block}} = 0.581$$

Measurements of the dependence of $B/\nabla B$ on the induction are also made. These measurements aid the final choice of the radial distance between the focusing and defocusing groups of blocks and in determining the basic parameters of the magnetic field correction system. There are 8 figures.

ASSOCIATION: Institut teoreticheskoy i eksperimental'noy fiziki GKAE (Institute of Theoretical and Experimental Physics GKAE)

SUBMITTED: April 11, 1962

# PARTICLE ACCELERATORS: STRONG-FOCUSING ACCELERATORS

"Measurement of Field of Magnets of Strong-Focusing Accelerators" by N. N. Grekov, A.P. Ryabov, and L.L. Gol'din, Probory i Tekhnika Eksperimenta, No 2, September-October 1956, pp 29-37

Discussion of the methods of measuring a magnetic field that alternates with time and has a gradient close to constant (the fields of the magnets in strong-focusing accelerators). Special coils, which permit directly measuring the gradient of the magnetic fields at the center of the coil, are used, along with an integrator with a stabilized "null". The results are displayed on an oscillograph.

The method makes it possible to measure the configuration of the magnetic fields with an accuracy to 0.02%. The great sensitivity of the apparatus made it possible to study many weak effects; for example, the variation in the configuration of the field when thin (0.2 mm) plates of nonmagnetic stainless steel (wall of a camera) are introduced into the gap of the magnets.

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SANDRIGAYLO, N F.; VASIL'YEV, M.V., prof., doktor tekhn.nauk;
GRAUR, I.F.; UGOV, F.M.; RYABOV, A.I.; ZHANTEMIROV, S.D.;
VOROSHILIN, G.I.; MAKAROVA, N.U., red.

[Accelerated development of strip mines and expansion of iron ore mining; as practiced at the Sokolovka-Sarbay Mining and Ore Dressing Combine] Forsirovannaia podgotovka kar'erov i razvitie dobychi zheleznykh rud; na primere Sokolovsko-Sarbaiskogo gornoobogatitel'nogo kombinata. Sverdlovsk, Sredne-Ural'skoe gos. knizhnoe izd-vo, 1964. 115 p. (MIRA 18:6)

RYABOV, A.S.

PROCESSES AND PROPERTIES INDEX

19

**Casein glue and polish.** A. S. Ryabov. Russ. 31,[illegible], Oct. 31, 1933. A soln. of casein is prepd. in the usual manner and condensation products of formalin with an excess of $NH_3$ are added.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES INDEX

RYABOV, A.S.

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Ct

**Galalith.** A. S. Ryabov. Russ. 31,610, Oct. 31, 1933. In the prepn. of galalith with soap as plasticizer an acid such as HCl is added to the formalin bath.

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

YEVDOKIMENKO, A.I.; KOTLYARENKO, V.V.; Prinimali uchastiye: RABICHEVA, L.M.; SYROVEGINA, K.V.; LEVIN, I.Kh.; GAVRILENKO, A.F.; RYABOV, A.V.; ALYUSHIN, Ye.I.; MARCHENKO, V.G.; BOLOTIN, L.G.; AFONIN, P.I.; SEVER'YANOV, G.N.

Heat exchange and the condensation of zinc vapor in drop condensers. Sbor. nauch. trud. Gintsvetmeta no.19:536-549 '62. (MIRA 16:7)

1. Sotrudniki Gosudarstvennogo nauchno-issledovatel'skogo instituta tsvetnykh metallov (for Rabicheva, Syrovegina, Levin, Gavrilenko, Ryabov). 2. Belovskiy tsinkovyy zavod (for Alyushin, Marchenko, Bolotin, Afonin, Sever'yanov).

L 21866-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 RPL WW/RM
ACCESSION NR: AR4049264 S/0081/64/000/016/S027/S027

B

SOURCE: Ref. zh. Khimiya, Abs. 16S142

AUTHOR: Razuvayev, G. A.; Lapshin, N. M.; Khidekel', M. L.; Mory*ganov, B. N.; Ryabov, A. V.

TITLE: Nitrogen containing peroxide compounds as initiators of vinyl monomer polymerization. II. Polymerization of methylmethacrylate initiated by the system aminoperoxide-dimethyl aniline

CITED SOURCE: Sb. Vy* sokomolekul. soyedineniya. Karbotsepn. vy*sokomolekul. soyedineniya. M., AN SSSR, 1963

TOPIC TAGS: bulk polymerization, methylmethacrylate polymerization, vinyl monomer polymerization, nitrogen containing peroxide initiator, aminoperoxide dimethylaniline initiator, polymerization initiator

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L 21866-65
ACCESSION NR: AR4049264

TRANSLATION: The study concerns bulk polymerization of methylmethacrylate initiated by the system cumenyl-N-phenylperoxycarbamate (I) - dimethyl aniline (II) - at 40C. It was found that the admixture of II substantially accelerates the polymerization process, peak acceleration occurring at a II:I ratio of 0.5. Data on molecular weight of polymethylmethacrylate coincide well with kinetic results. A solution containing various ratios of I and II in $C_6H_6$ was treated with 2, 4, 6-tri-tert-butylphenol. After reaction with the radicals, the latter provides 2, 4, 6-tri-tert-butylphenoxyl radicals which are stable under these conditions and can be fixed by means of the EPR technique. The concentration of stable radicals fixable in this manner was highest at a II:I ratio of 0.5. The decomposition of equimolecular mixtures of I and II in a $C_6H_6$ solution was studied at 40C. Analysis of decomposition products disclosed $CO_2$, aniline, dimethylaniline, dimethylphenyl carbinol, acetophenone, azobenzene and tarry residues. Admixture of II had negligible effects on polymerization at 60C with four aminoperoxides containing the $>NCH_2OO-$ group. Asymmetrical aminoperoxides are more susceptible to this effect than are their

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ACCESSION NR: AR4049264

symmetrical counterparts. Activity of the initiator is determined by the structure of a peroxide and the stabilization of the $>NCH_2OO-$ group. For Part I, see RZhKhim, 1962, 10R38. Authors' abstract

SUB CODE: OC, MT ENCL: 00

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